

EP 1 777 707 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
25.04.2007 Bulletin 2007/17

(51) Int Cl.:
G11B 33/04 (2006.01)

(21) Application number: **06022069.6**

(22) Date of filing: **20.10.2006**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI
SK TR**
Designated Extension States:
AL BA HR MK YU

(30) Priority: **20.10.2005 US 728456 P
20.10.2005 US 728497 P**

(71) Applicant: **MeadWestvaco Corporation
Glen Allen VA 23060 (US)**

(72) Inventors:
• **Gelardi, John A.
Kennebunkport, Maine 04046 (US)**
• **Kostyun, James
Pittsfield, Massachusetts 01201 (US)**
• **Philippe, James
Sanford, Maine 04073 (US)**

(74) Representative: **Liska, Horst et al
Weickmann & Weickmann
Patentanwälte
Postfach 86 08 20
81635 München (DE)**

(54) Media container with band header

(57) A container for carrying an information storage medium includes top and bottom walls connected by a hinge or spine with each wall having upper and lower faces and side walls and end walls extending inwardly therefrom. The container further includes a medium-engaging element for securing the storage medium thereto, and a display region provided on the upper face of the top wall, in a region proximate at least one of the first and

second end walls. The top and bottom walls, together with their respective side walls and end walls form first and second covers, respectively. The covers are hinged together, and are provided with latching features to secure the container in a closed condition. A display region is provided on the outer surface of the top wall, in an area proximate one end of the container, the display region being configured and adapted for display of indicia.

Fig. 1A

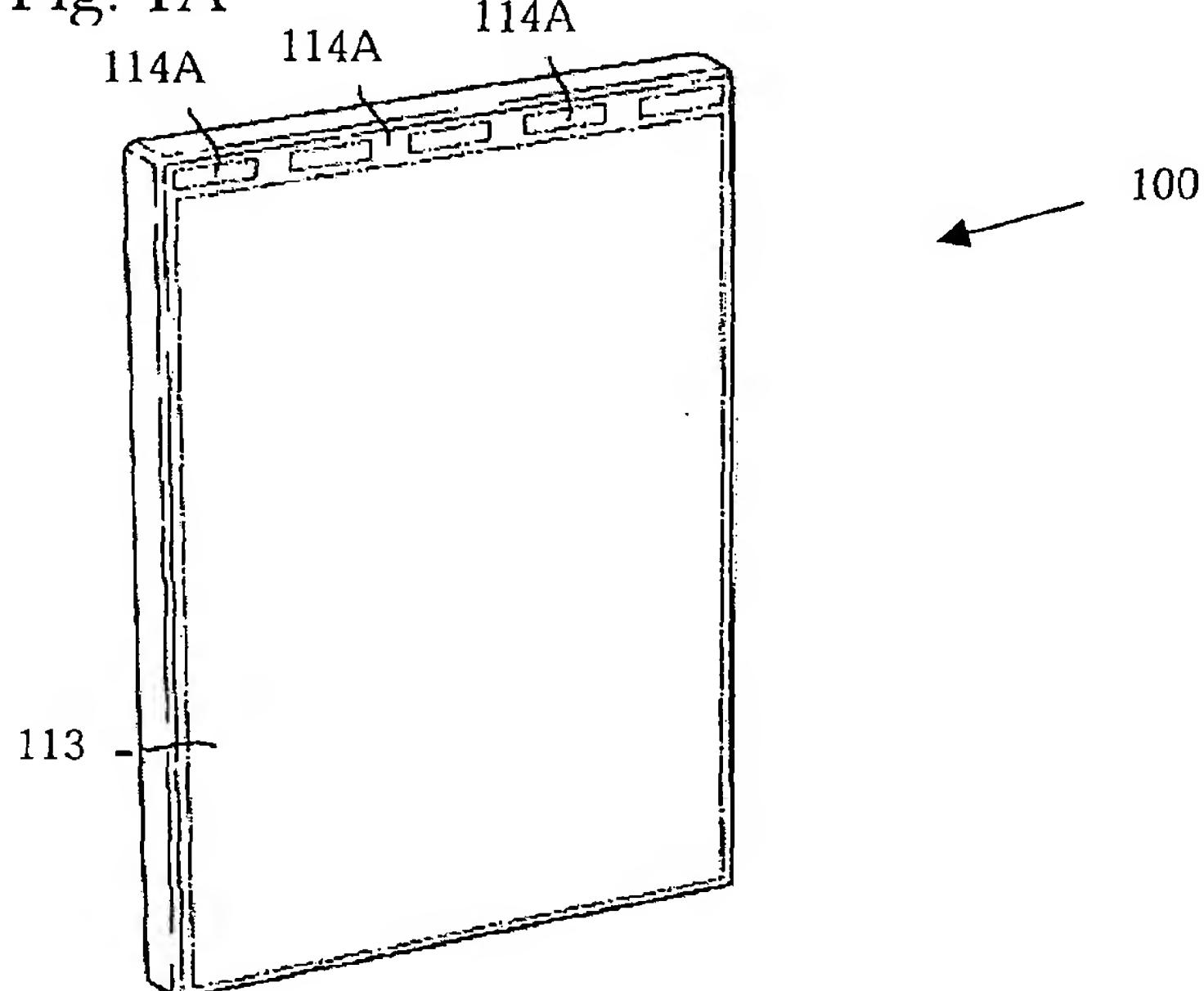
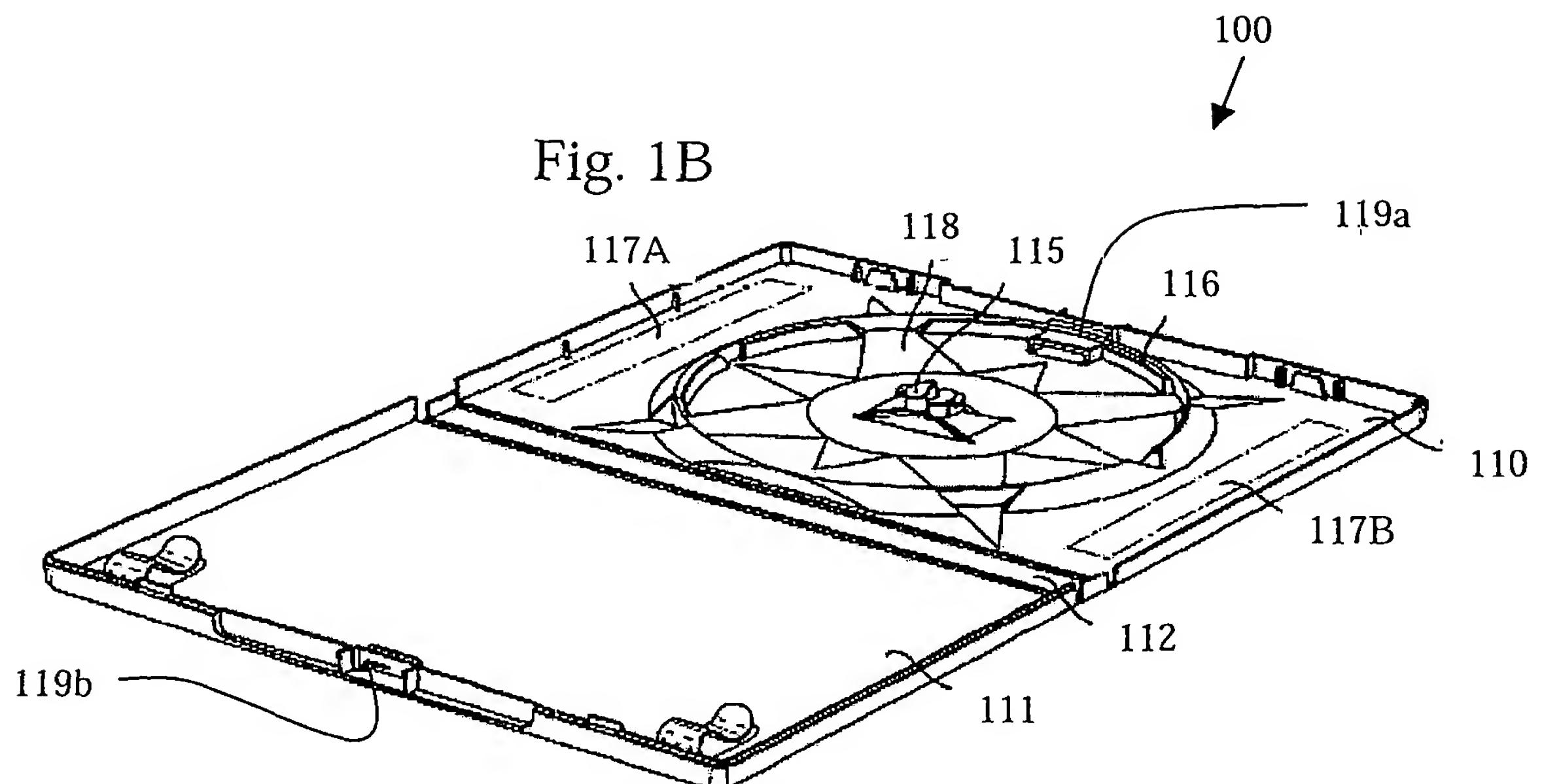


Fig. 1B



DescriptionCROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. patent application serial number 10/590,981, filed August 29, 2006, which is a U.S. national stage application of PCT/GB06/00903, filed March 13, 2006, which in-turn claims priority under 35 U.S.C. §119 to GB application 0505004.2, filed March 11, 2005. This application also claims the benefit under 35 U.S.C. §119 of U.S. provisional applications 60/728,456 and 60/728,497, each filed October 20, 2005. Each of the foregoing applications is hereby incorporated by reference in its entirety.

BACKGROUND OF THE INVENTIONField of the Invention

[0002] The present invention relates to containers for holding recording media. Particularly, the present invention is directed to such containers for holding relatively thin media, such as disc-shaped media.

Description of Related Art

[0003] Various disc-shaped media are currently used to record and store information optically or magnetically. Such media include compact discs that hold audio or video or other data recorded physically, such as by use of a laser beam, which are then optically read by a laser beam. Often, such discs are sold with information already recorded thereon. In other applications, such discs are sold in blank form and are used by the customer to record and store information thereon. As used herein, the term "compact disc" or "CD" is intended to encompass all such discs, whatever their size, and for all known or proposed uses.

[0004] Compact discs containing laser recorded information are typically packaged in injection molded plastic enclosures designed to hold one or more CDs for protecting the discs during storage and shipment. Enclosures presently used, such as the well known "jewel box," include a base or bottom element, an insert or tray in the base element for positioning and supporting the compact disc in the base element, e.g., by a center projection, commonly referred to as a "rosette", which engages the periphery of the aperture in the center of the disc, and an operable lid or cover hinged to the base element through a spine section. Other enclosures omit the tray, and support the disc via a center projection formed directly on the base element. The enclosure is typically at least partially transparent and graphics relating to the disc and containing trademark and sales promotional information are usually inserted in such a manner as to be visible through the enclosure. Moreover, in certain embodiments a clear plastic sheet or film is applied to the outside of the package, forming a pocket for receiving an

insert containing graphics (i.e., a "slip sheet").

[0005] While such containers can include printed material in such a pocket, or directly printed thereon, the information on the printed material will vary, to include information related to the particular medium held within the container. For example, containers for different movies on DVDs (or digital video discs) will include printed information related to the respective movie.

[0006] With the ever increasing variety of formats for recorded media, variations in the printed information can result in difficulty locating a film in the desired format. That is, there is no guarantee that different movie studios and different graphic artists will provide icons indicating the medium format on the printed material in a consistent and easy-to-find location. The present invention provides a solution for this problem.

SUMMARY OF THE INVENTION

[0007] The purpose and advantages of the present invention will be set forth in and apparent from the description that follows. Additional advantages of the invention will be realized and attained by the methods and systems particularly pointed out in the written description and claims hereof, as well as from the appended drawings.

[0008] To achieve these and other advantages and in accordance with the purpose of the invention, as embodied, the invention includes a container for carrying an information storage medium. The container, in accordance with one embodiment of the invention, includes bottom and top walls each having inner and outer surfaces, a medium-engaging element provided on the inner surface of at least one of the top and bottom walls, for securing the storage medium thereto, a hinge connecting the bottom wall and the top wall, and a display region provided on the outer surface of the top wall, in a region proximate at least one end of the container. The display region is configured and adapted for the display of indicia, and can have any desired shape, such as rectangular or ovoid, for example.

[0009] The container can additionally include first and second latching elements defined on the top and bottom walls, respectively, for engaging one another to secure the container in a closed condition. The container can further include a film applied thereto forming a pocket extending from and across the outer surface of the top wall, around the hinge and across the outer surface of the bottom wall. The pocket can function as a receptacle for printed material related to the media held in the container. The film forming such pocket can be set-back from the display region, allowing an unobstructed view of the display region. The display region can be embodied so as to extend between about 1 and 5 centimeters from the an end wall of the container, and can extend fully across the container, parallel to the end wall.

[0010] The indicia can be printed on or molded into the upper face of the top wall. The indicia can be provided on an extension supported by and extending from the

bottom wall through an aperture defined in the display region of the top wall. If so embodied, indicia can be provided that corresponds to a media format of the storage medium carried within the container.

[0011] In accordance with another aspect of the invention, a container for carrying an information storage medium is provided, having a spine, a first cover, and a second cover. The first and second covers are hingedly secured to the spine. The second cover is configured and adapted to engage the first cover, to secure closure of the container. Further, at least one of the first and second covers is provided with a band header for display of indicia, arranged along one edge of the cover on which the band header is provided.

[0012] The container can further include a first latching element defined on the first cover and a second latching element defined on the second cover, for engaging the first latching element.

[0013] If desired or required, a pocket can be applied thereto, extending from and across an outer face of the first cover, around the spine and across an outer face of the second cover. Additional features set forth above in connection with the first aspect of the invention can advantageously be applied to this aspect of the invention.

[0014] It is to be understood that both the foregoing general description and the following detailed description are exemplary and are intended to provide a non-limiting explanation of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] The accompanying drawings, which are incorporated in and constitute part of this specification, are included to illustrate and provide a further understanding of the method and system of the invention. Together with the description, the drawings serve to explain the principles of the invention, wherein:

Figure 1A is a front isometric view of a first embodiment of a media container in accordance with the invention, having indicia provided in a region near an edge of the container, shown in a closed condition;

Figure 1B is a side isometric view of the container of Figure 1A, shown in an open condition;

Figure 2 is a front isometric view of a variation of the container of Figure 1A, shown in an open condition, having internal indicia regions differing from those of the container of Figure 1B;

Figure 3A is another embodiment of a media container constructed in accordance with the invention, having a band-shaped region for display of indicia, the container being shown in a closed condition;

Figure 3B is a side isometric view of the container of Figure 3A, shown in an open condition;

Figure 4 is an isometric view of still another embodiment of a media container constructed in accordance with the invention, having indicia provided in

band-shaped display region thereon, the indicia being molded into the display region;

Figure 5 is an isometric view of the media container of Figure 4, shown in an open condition, illustrating the outer surface of the media container;

Figure 6A is a further embodiment of a media container constructed in accordance with the invention, having an insert tray provided therewith, which includes indicia formed thereon, which is displayed through an aperture formed in the cover;

Figure 6B is an isometric view of the container of Figure 6A, with the insert tray fully inserted therein; and

Figure 6C is an isometric view of the container of Figure 6A, shown in a closed condition.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0016] Reference will now be made in detail to selected embodiments of the invention, which are illustrated in the accompanying drawings.

[0017] In accordance with the invention, a container for carrying an information storage medium is provided including top and bottom walls connected by a hinge or spine with each wall having upper and lower faces, and side walls and end walls extending inwardly therefrom. The container further includes a medium-engaging element for securing the storage medium thereto, and a display region provided on the upper face of the top wall, in a region proximate at least one of the first and second end walls. The top and bottom walls, together with their respective side walls and end walls form first and second covers, respectively. The covers are hinged together, and are provided with latching features to secure the container in a closed condition.

[0018] For purpose of explanation and illustration, and not limitation, Figures 1A and 1B illustrate a media container 100 in accordance with the invention comprising a bottom wall or base portion (or bottom "wall" or "cover") 110 connected to a lid portion (or upper "wall" or "cover") 111 by a spine portion 112. A clear plastic film 113 is attached to the exterior of the container 100 forming a pocket. A cover sheet or "slip sheet" (shown blank) is inserted into the pocket behind the film 113. The film 113 preferably does not cover the entire front face of the container but, instead, leaves a band 114 at the top where the outer surface of the container 100 remains exposed. The band 114 extends across the front face of the container, around the spine and across the rear face of the container. This band 114 is available for inclusion of indicia, such as customized molding or printing, e.g. of graphics or logos. In the example shown, a series of words (represented by areas 114A) are molded or printed in the area of the band 114 on the front face of the container. These may, for example, be the name of the studio, movie or artist. Alternatively or additionally, a logo corresponding to a media format can be included in the

band 114, such as a logo corresponding to one of "DVD," "HDDVD" or "Blu-Ray™," formats, for example. Alternatively, or additionally, logos or symbols of a more 3-dimensional nature may be molded in the area of the band 114, e.g. projecting therefrom by up to a predetermined distance, e.g., 3 mm. Alternatively or additionally, the surfaces of the container in the area of the band 114 may be customized so as to have a distinctive shape or appearance, e.g. the edges, corners and/or faces thereof may be formed with various convex, concave or angular features. In accordance with one aspect of the invention, the band 114 stands proud, e.g. by 0.5-1.0mm, of the adjacent surfaces of the container 100.

[0019] A similar band (not shown) not covered by a film 113 can be provided around the lower end of the container 100, in place of the band 114 or in addition thereto. In alternate embodiments, the film 113 is omitted so that the major faces of the lid, spine and base portions can be provided with customized features at any position thereon.

[0020] Figures 1B and 2 illustrate two variations of the interior portion of the container 100. A media-engaging element (or "rosette") 115 is provided on the interior of the base portion 110 for receiving a disc-shaped medium, and a circular upstand 116 is provided for surrounding the periphery of the disc-shaped medium. In the embodiments of Figures 1B and 2, the upstand 116 is positioned substantially centrally in the base portion 110 so regions 117A and 117B are left at either end of the base portion. In an alternative embodiment (not shown), the upstand 116 may be offset from the center of the base portion 110, such that it is positioned, for example, closer to the bottom end walls. Internal printed or molded graphics features may be formed in the display regions 117A and 117B (outlined by dash-dot lines). If desired, the display region 114 can be embodied as a transparent region, with the indicia provided in region 117A being visible therethrough.

[0021] Graphics, or other customized features can, however, be formed anywhere on the internal faces of the base, spine and lid portions. The illustrated embodiments show a star shape 118 molded on the base portion 10 within the area defined by the circular upstand 116 and extending beyond the upstand. V-shaped grooves are additionally formed within the upstand 116, and correspond to portions of the star shape 118. Naturally, the specific shape of features of containers in accordance with the invention can be embodied as desired. For example, while the display region 117B of Figure 1B is substantially rectangular, the display region 117B of Figure 2 includes circular and triangular regions.

[0022] Moreover, as set forth above, the container 100, preferably includes one or more latching features to secure the container 100 in a closed condition. Latching elements 119a and 119b are arranged on respective ones of the bottom wall 110 and the top wall 111.

[0023] Figures 3A and 3B illustrate another embodiment of a media container 300 in accordance with the

invention having regions 330, 331, 332A and 332B for display of indicia, which can be customized as desired. As with the aforementioned embodiment described above in connection with Figures 1A, 1B and 2, the exterior of the container 300 includes an indicia display region 330 in which a conventional display material is provided by, e.g., a printed sheet positioned behind a clear film attached to the exterior of the container. A second display region 331 in the form of a band is arranged adjacent one or more ends of the container 300, which extends generally the width of the container 300. As with the band region 114 of the container 100 of Figures 1A, 1B and 2, the outer surface of the injection molded container 300 in this region 331 is preferably exposed—that is, not covered by a clear film. Although in alternate embodiments, a clear film can be applied thereto, if desired. In this band region 331, as with the foregoing embodiment, customized printed or molded features can be provided.

[0024] In the interior of the container 300, customized features can additionally be formed in flat areas, e.g. as indicated at 332A and 332B, on the exposed surfaces of the interior of the base portion 334 outside an upstand 333. A logo may, for example, be printed on or molded in area 332A and the name of a film or series to which the medium to be housed in the container relates may be printed on or molded in area 332B. In addition, the shape of the upstand 333 may be customized, e.g. to tie in with a feature of the logo or movie, if desired.

[0025] Figures 4 and 5 illustrate a further embodiment of a container 400 constructed in accordance with the invention. The container 400 includes a top cover 411 and a bottom cover 410, joined by a hinge element 412. The hinge 412, as with other embodiments set forth herein, can be a so-called living hinge formed by providing a region of thinned material thickness, but any suitable hinge design can be used.

[0026] The top cover 411 includes a plurality of display regions 430, 414. The larger display region 430, which can extend around the hinge 412 to the bottom cover 410, will typically include a clear sleeve 535 (Fig. 5) adhered thereto with printed material being inserted behind the sleeve, as described above in connection with the preceding embodiments. A band-shaped display region 414 is provided along the upper edge of the container 400, with indicia 415 integrally molded therewith. As illustrated, the band-shaped display region 414 stands proud of the large display region 430, with a small transition 417 defining a border between the regions. This transition 417 can help secure printed material within a sleeve 535 held on the large display region 430.

[0027] As can be seen in Figure 5, the bottom cover 410 includes a band-shaped display region 514, which mirrors the band-shaped display region 414 of the top cover 411, although in the illustrated embodiment, no indicia is included thereon.

[0028] Further, the embodiment of Figures 4 and 5 includes rounded edges 435, which meet at respective

rounded corners 431. As illustrated, the corners are arcuate and relatively gradual. However, variations on the precise shape of the corners is possible.

[0029] Figures 6A, 6B and 6C illustrate yet another embodiment of a media container 600 constructed in accordance with the present invention. The container 600 includes a top cover 611 and a bottom cover 610, joined by a hinge element 612. The container 600 further includes an insert tray 650, which is inserted into the bottom cover 610, and includes a rosette 655 and a circular detent 657 provided for receiving the periphery of the disc-shaped medium. The tray 650 further includes an indicia region 615 formed on and extending from the surface of the tray 650, so that when the top cover 611 is closed, the indicia region 615 is visible through an aperture 665 formed in the top cover 611 when the container is in a closed position. With this configuration, the indicia can be changed without the need to redesign and mold an entire container, but only a tray (e.g., tray 650) need be redesigned. Alternatively still, the indicia region 615 can be removable from the container 600 or the insert tray 650, thereby only necessitating a small piece be changed if a redesign occurs.

[0030] Figure 6B illustrates the container 600, with the insert tray 650 secured therein. The tray can be attached to the remainder of the container 600 by any suitable means, such as, but not limited to adhesive, cohesive, heat, sonic or solvent welding, mechanical interlocking elements or snap fit.

[0031] As can be seen in Figure 6C, the top cover 611 includes a plurality of display regions 630, 614. As with foregoing embodiments, the larger display region 630, which can extend around the hinge 612 to the bottom cover 610, will typically include a clear sleeve 635 secured thereto, with printed material being inserted behind the sleeve 635. A band-shaped display region 614 is provided along the upper edge of the top cover 611, and as mentioned above, includes an aperture 665 through which the indicia region 615 passes, and is visible from the external container. Alternatively, the display region 614 can be transparent, and the indicia region is visible therethrough. Moreover, the indicia region 615 need not extend fully to or through the aperture 665. Indeed, the indicia region 615 can be coplanar with the insert tray 650. As will be appreciated, the indicia region 615 need not be provided on a separate insert tray, but can be provided on the bottom cover 610 itself, if desired.

[0032] It will be apparent to those skilled in the art that various modifications and variations can be made in the media containers of the present invention without departing from the spirit or scope of the invention. Thus, it is intended that the present invention include modifications and variations of the specific embodiments set forth herein.

[0033] A container for carrying an information storage medium includes top-and bottom walls connected by a hinge or spine with each wall having upper and lower faces and side walls and end walls extending inwardly

therefrom. The container further includes a medium-engaging element for securing the storage medium thereto, and a display region provided on the upper face of the top wall, in a region proximate at least one of the first and second end walls. The top and bottom walls, together with their respective side walls and end walls form first and second covers, respectively. The covers are hinged together, and are provided with latching features to secure the container in a closed condition.

10

Claims

1. A container for carrying an information storage medium, the container comprising:
 - a) a bottom wall having inner and outer surfaces;
 - b) a top wall having inner and outer surfaces;
 - c) a medium-engaging element provided on the inner surface of at least one of the top and bottom walls, for securing a storage medium thereto;
 - d) a hinge connecting the bottom wall and the top wall; and
 - e) a display region provided on the outer surface of the top wall, in an area proximate one end of the container, the display region being configured and adapted for display of indicia.
2. The container of claim 1, further comprising:
 - a) a first latching element defined on the bottom wall; and
 - b) a second latching element defined on the top wall, for engaging the first latching element, to thereby secure the container in a closed condition.
3. The container of claim 1, further comprising a film applied thereto forming a pocket extending from and across the outer surface of the top wall, around the hinge and across the outer surface of the bottom wall, the pocket providing a receptacle for printed material related to the media held in the container.
4. The container of claim 3, wherein the film is offset from the display region, allowing an unobstructed view of the display region.
5. The container of claim 1, wherein the display region is generally rectangular in shape.
6. The container of claim 1, wherein the display region is defined in a region extending between about 1 and 5 centimeters from an end wall of the container.
7. The container of claim 6, wherein the display region extends fully across the container, parallel to the end

wall.

8. The container of claim 1, wherein the indicia is printed on the outer surface of the top wall.

9. The container of claim 1, wherein the indicia is molded into the outer surface of the top wall.

10. The container of claim 1, wherein the indicia is provided on an extension supported by and extending from the bottom wall and is visible through an aperture defined in the display region of the top wall when the container is in a closed position.

11. A container for carrying an information storage medium, the container comprising:

- a) a spine;
- b) a first cover hingedly secured to the spine;
- c) a second cover hingedly attached to the spine, configured and adapted to engage the first cover, to secure closure of the container; and
- d) at least one of the first and second covers being provided with a band header for display of indicia, arranged along one edge of the cover on which the band header is provided.

12. The container of claim 11, further comprising:

- a) a first latching element defined on the first cover; and
- b) a second latching element defined on the second cover, for engaging the first latching element, to thereby secure the container in a closed condition.

13. The container of claim 11, further comprising a pocket applied thereto, extending from and across an outer face of the first cover, around the spine and across an outer face of the second cover, the pocket providing a receptacle for printed material related to the media held in the container.

14. The container of claim 13, wherein the pocket is offset from the band header, allowing an unobstructed view of the band header.

15. The container of claim 11, wherein the band header is generally rectangular in shape.

16. The container of claim 11, wherein the band header is defined in a region extending between about 1 and 5 centimeters from an edge of at least one of the first and second covers.

17. The container of claim 11, wherein the indicia is printed on the band header.

5

10

20

25

35

40

45

50

55

18. The container of claim 11, wherein the indicia is molded into the band header.

19. The container of claim 11, wherein the indicia corresponds to a media format of the storage medium carried within the container.

20. The container of claim 11, wherein:

- a) the band header is provided on the first cover; and
- b) the indicia is provided on an extension supported by and extending from the second cover and is visible through an aperture defined in a band header of the first cover when the container is in a closed position.

Fig. 1A

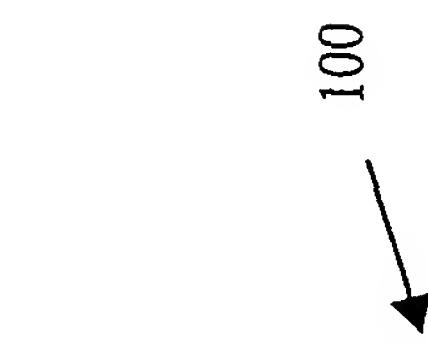
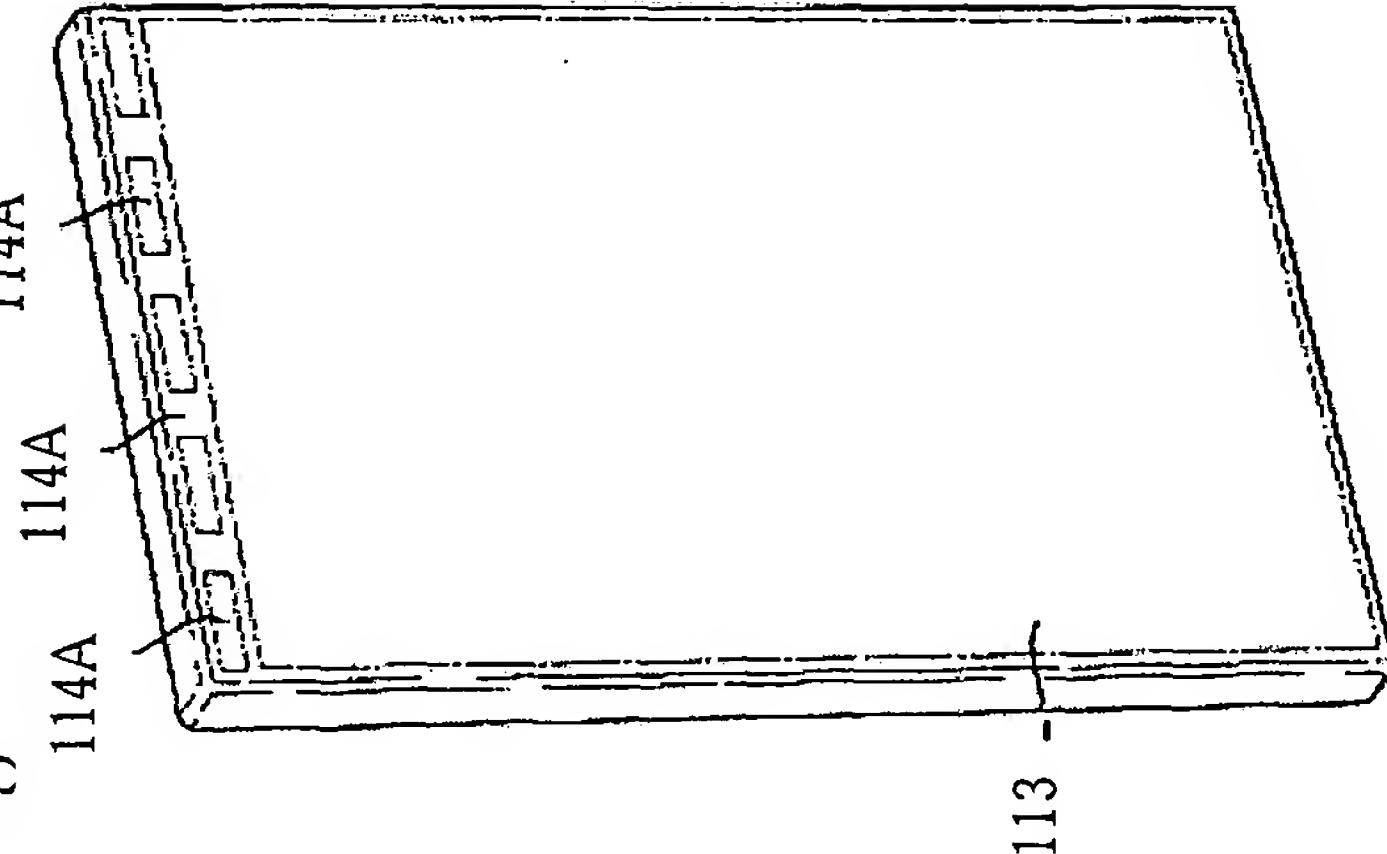
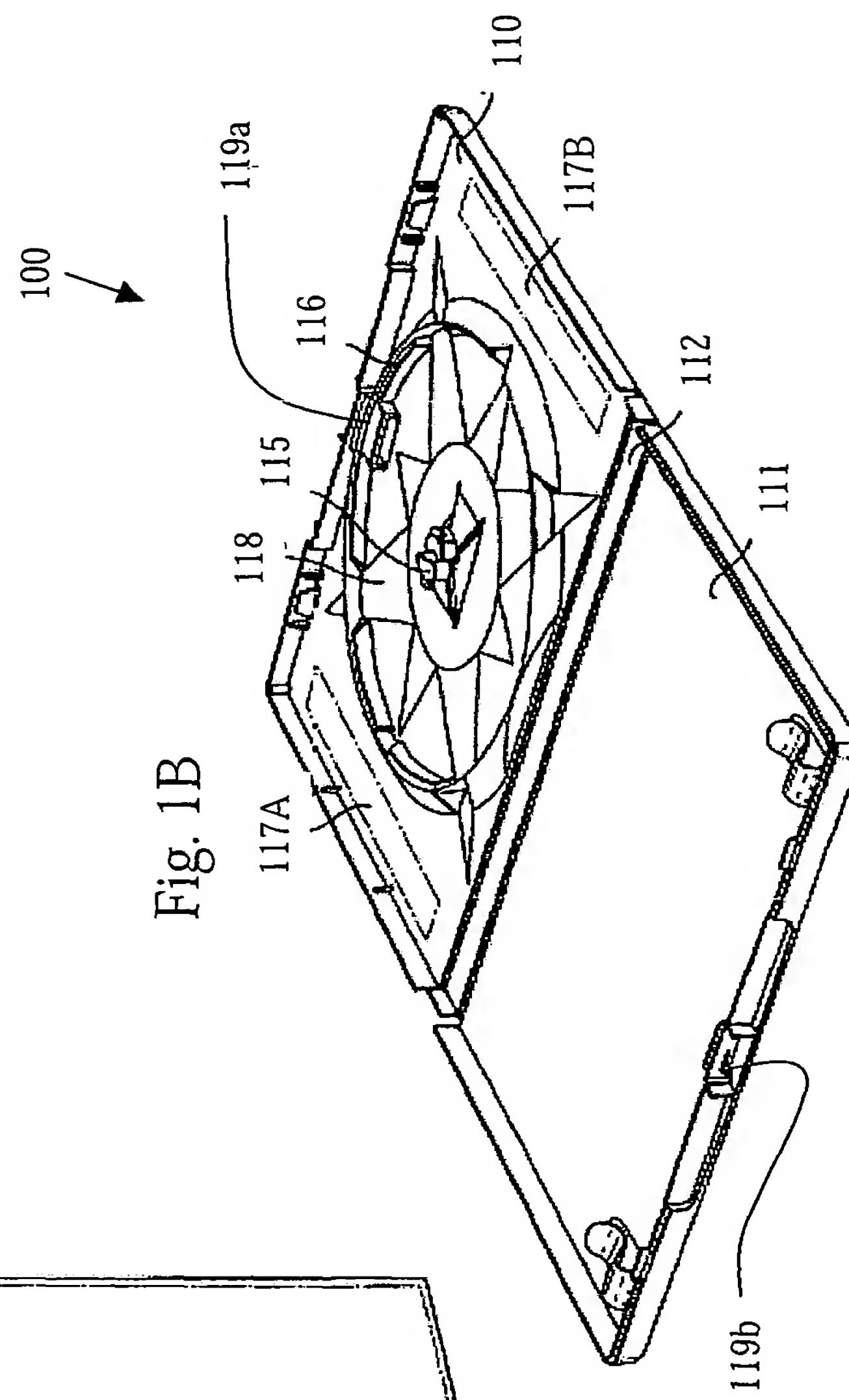


Fig. 1B



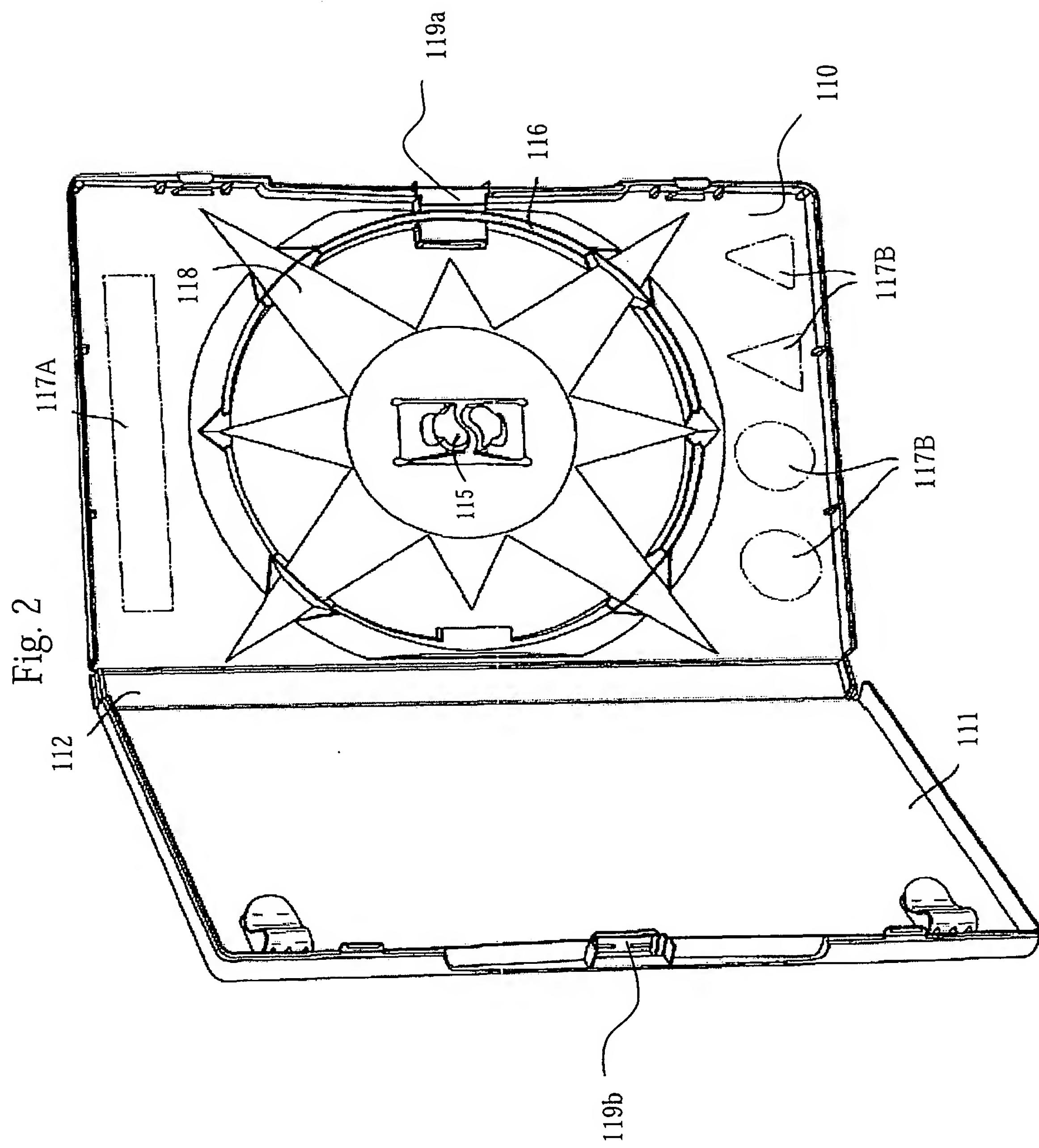
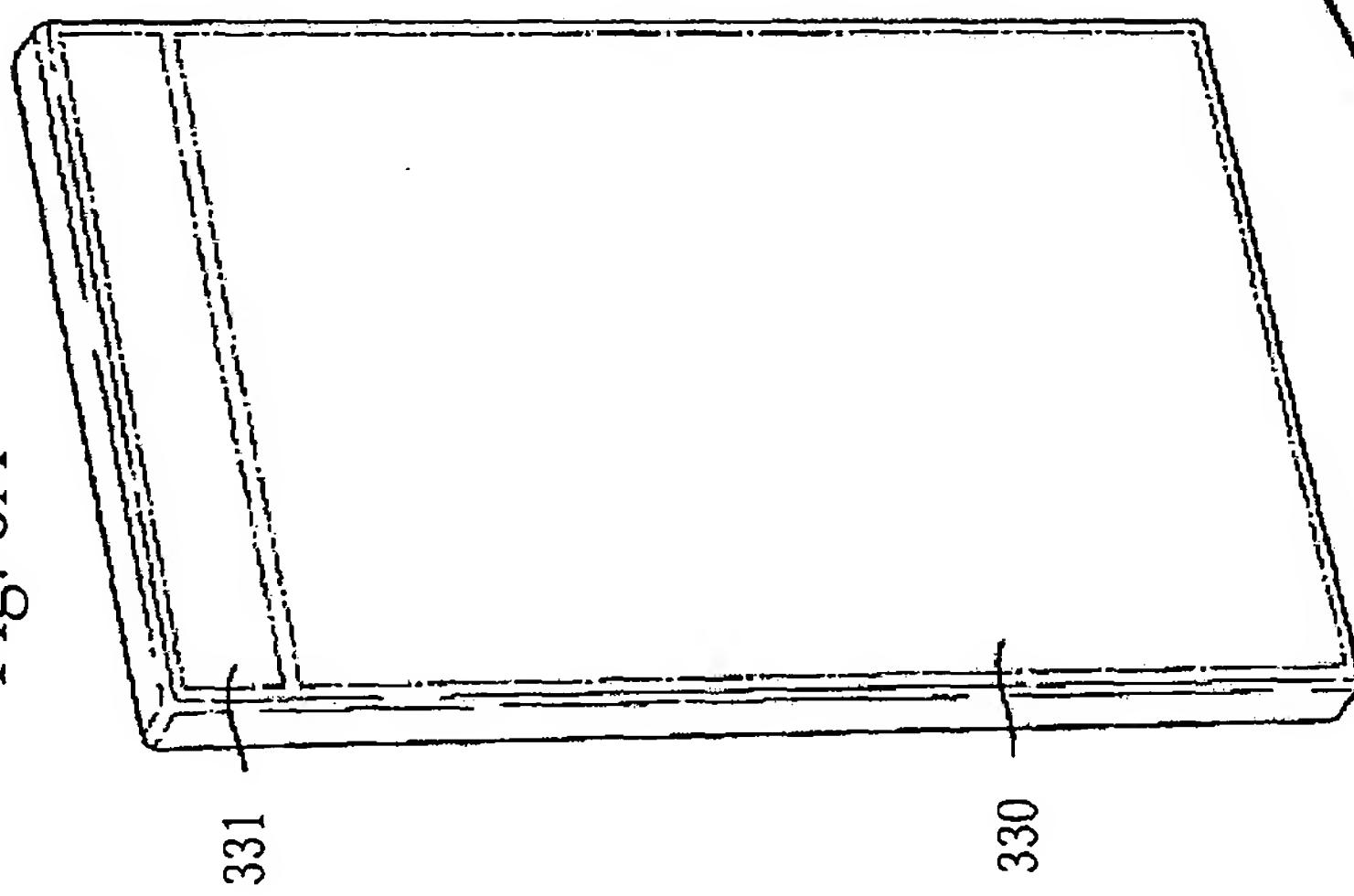


Fig. 3A



300

300

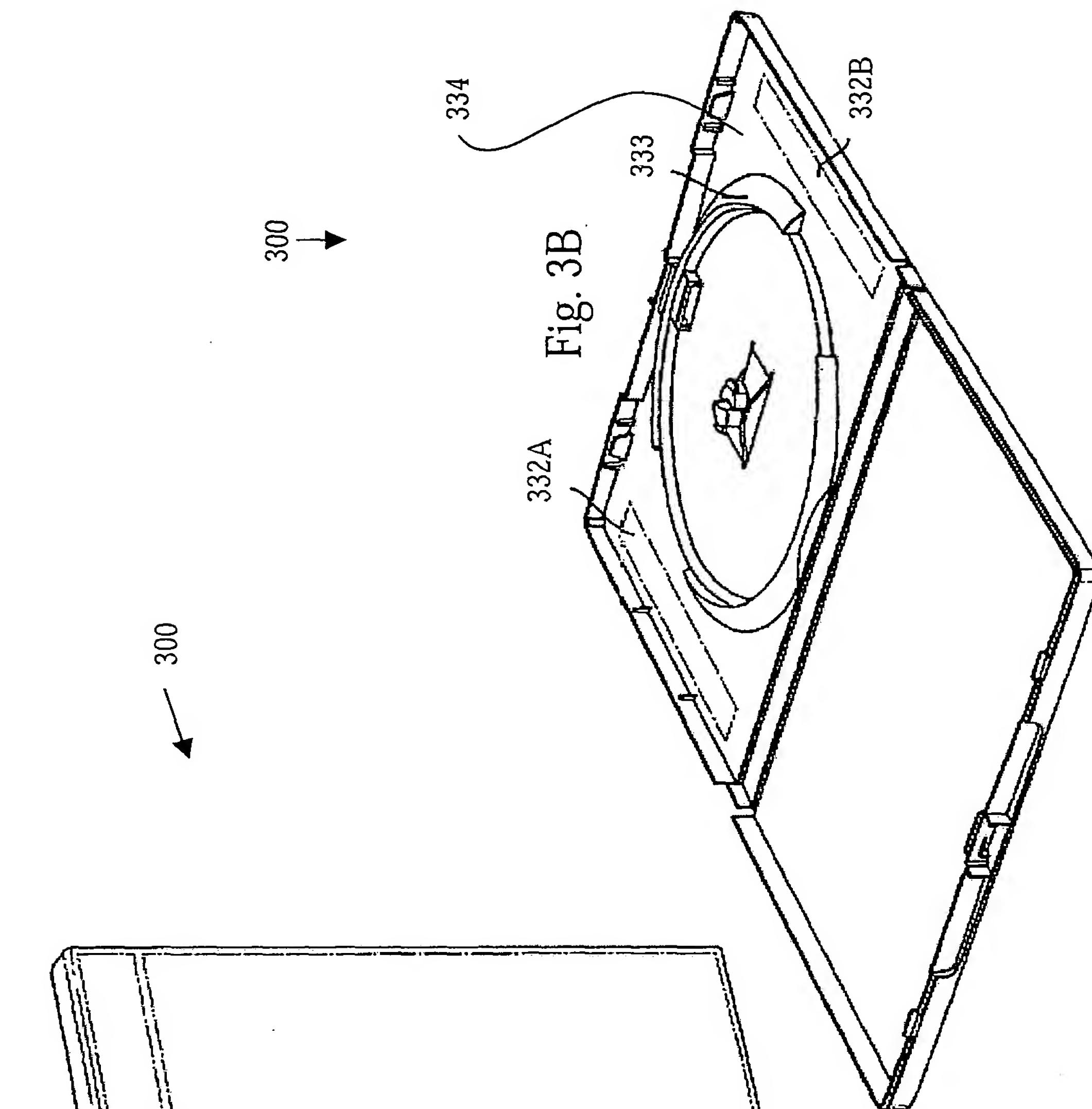


Fig. 3B

334

332A

332B

333

330

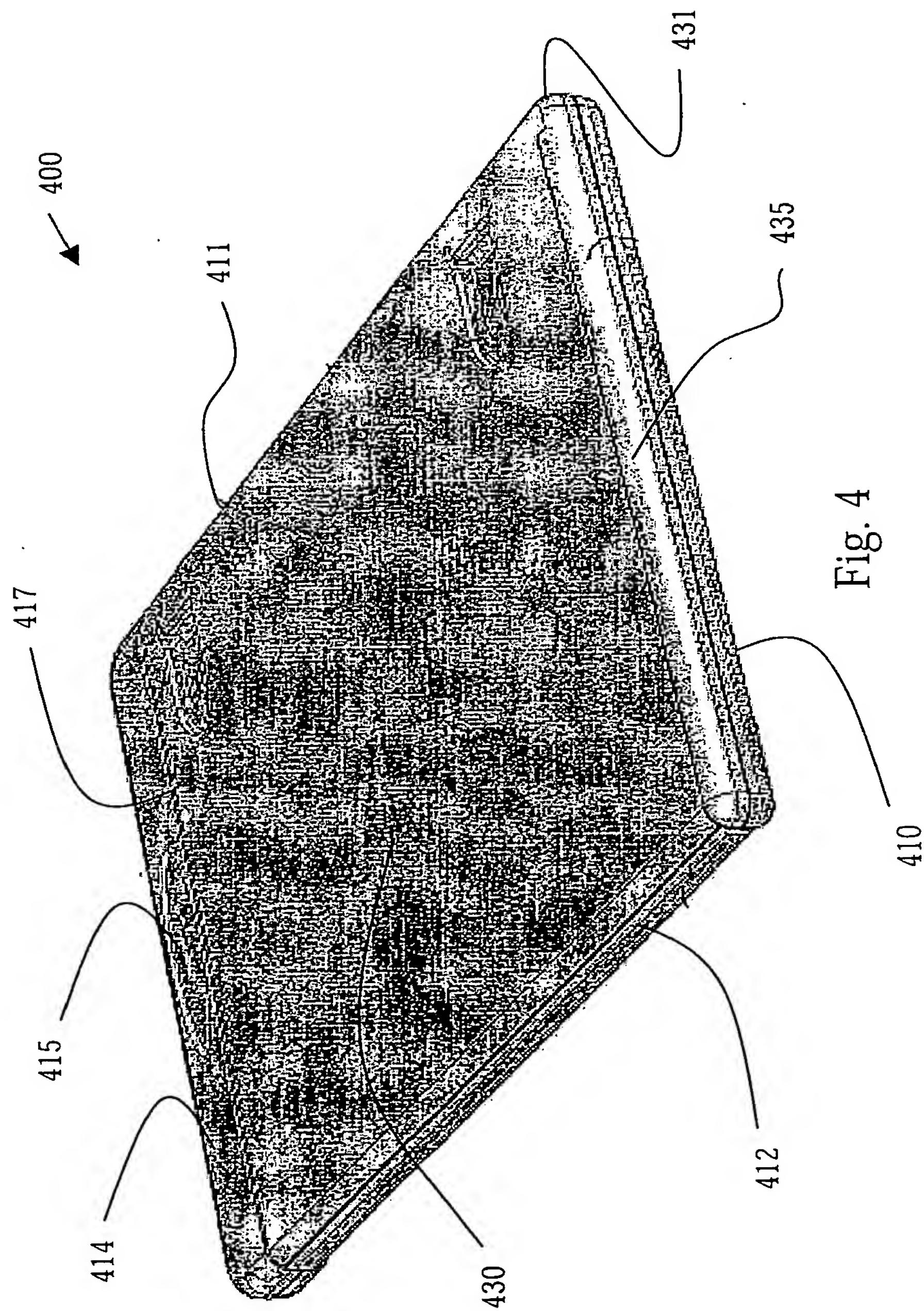


Fig. 4

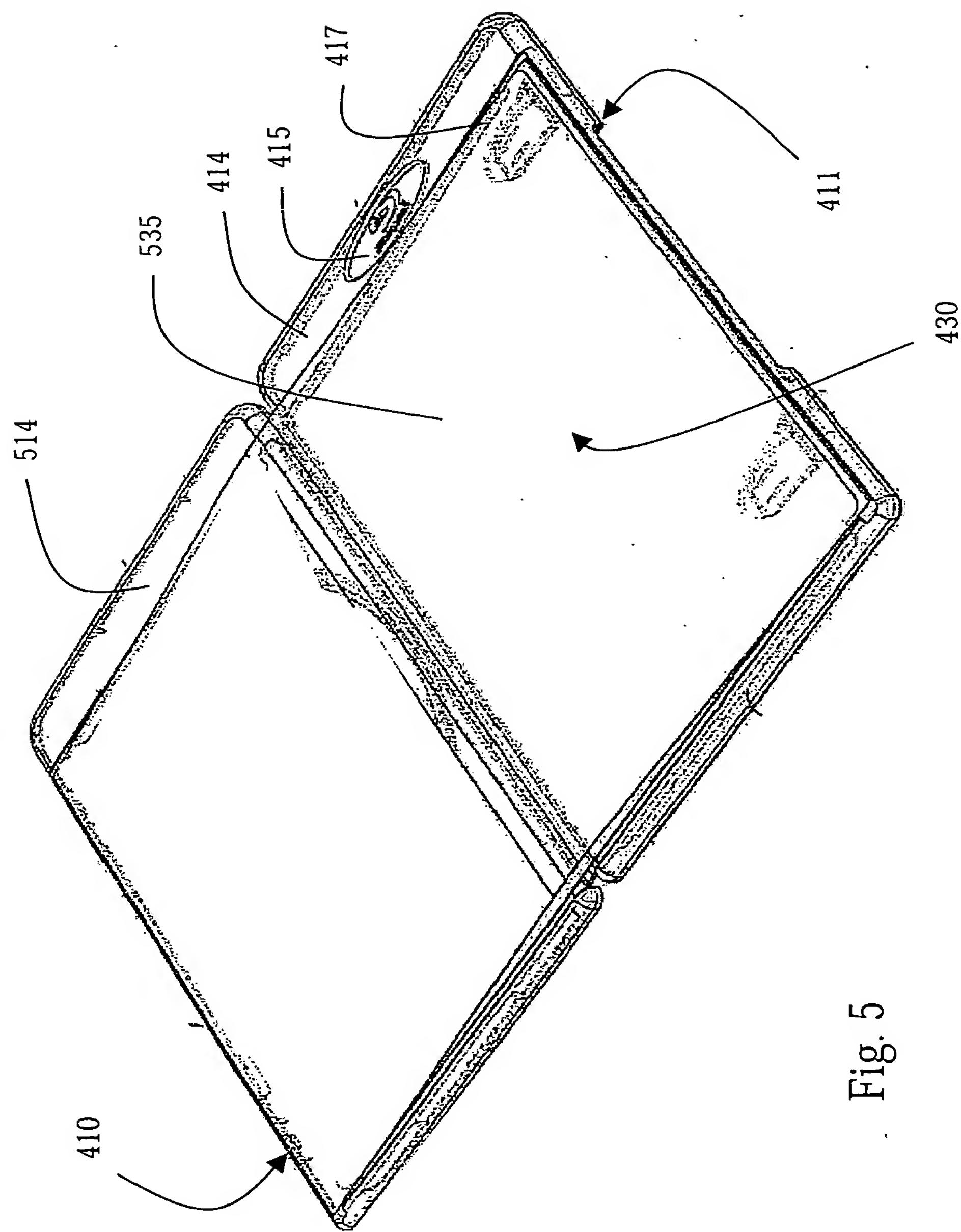


Fig. 5

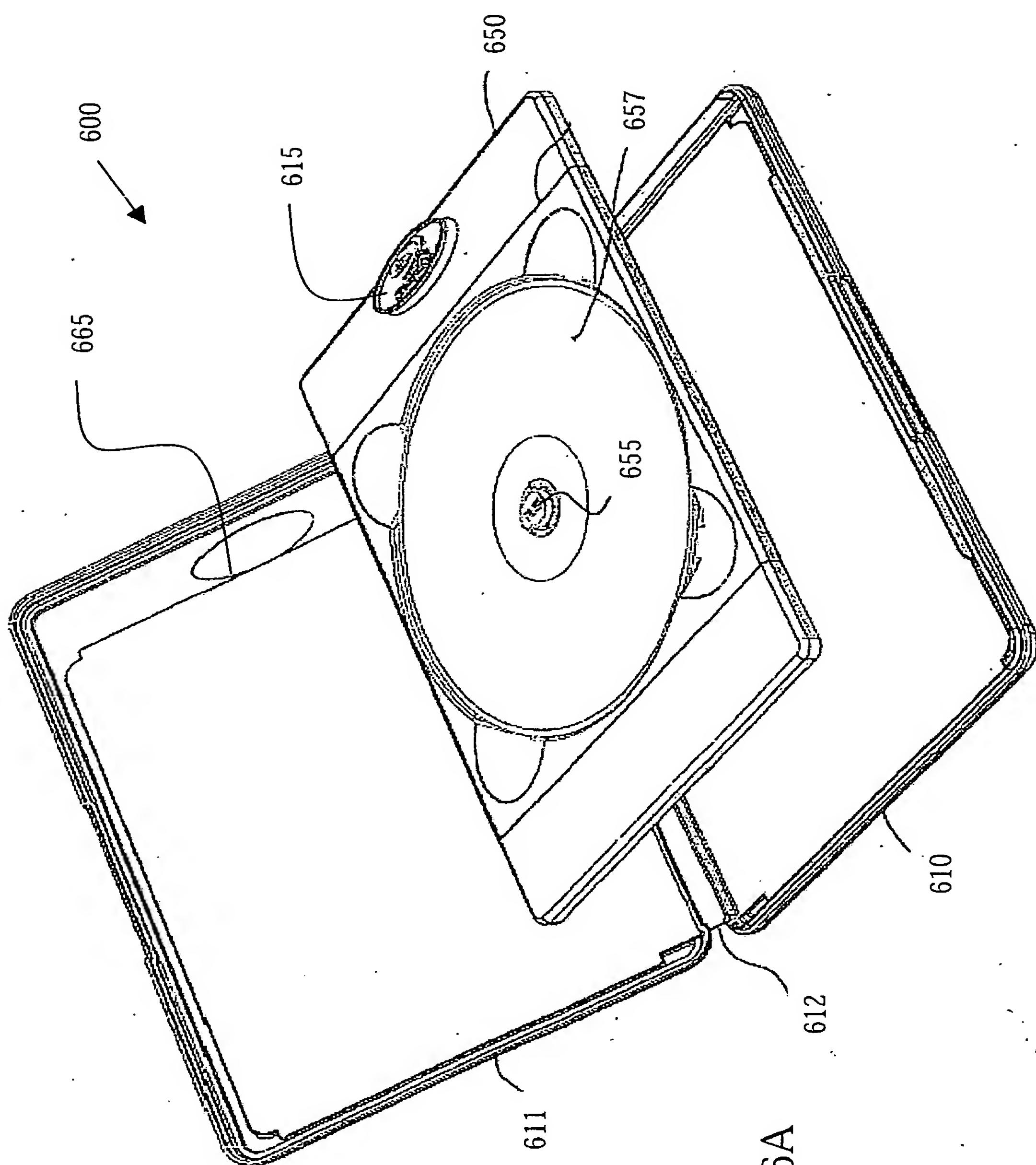


Fig. 6A

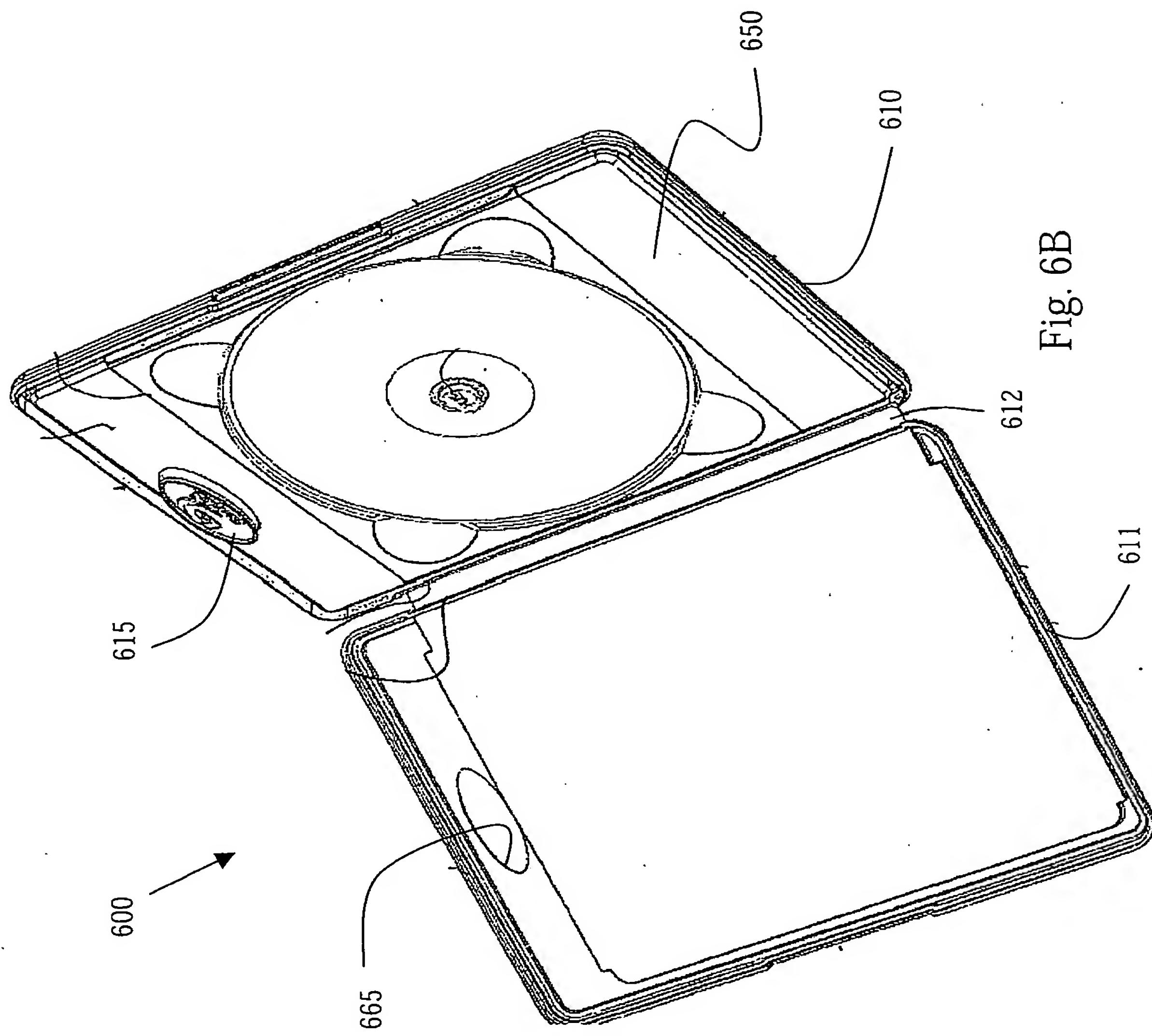


Fig. 6B

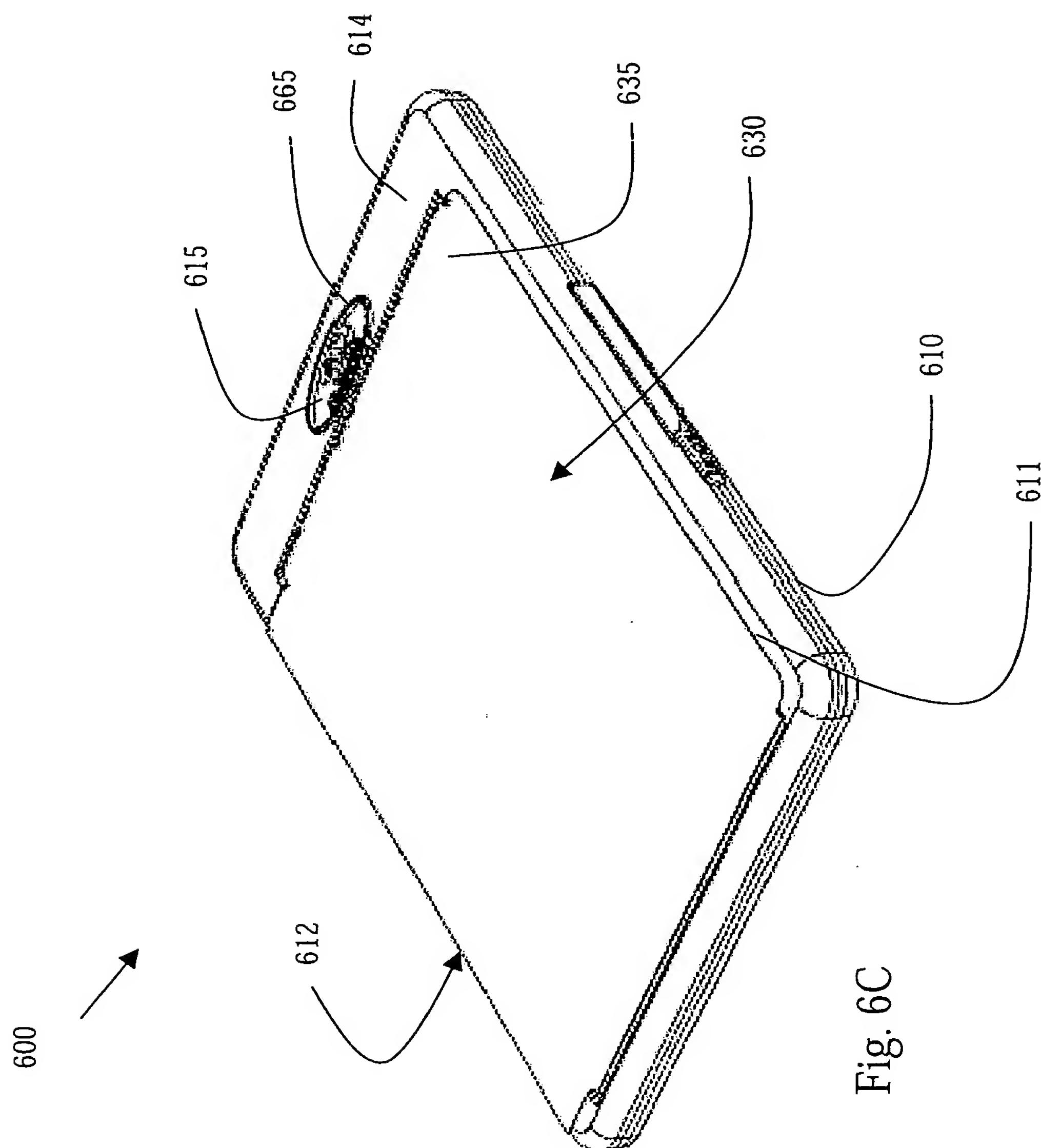


Fig. 6C



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 2003/196916 A1 (JAKOBOWICZ ERIC W [US]) 23 October 2003 (2003-10-23)	1-3,5-7, 11-13, 15,16	INV. G11B33/04
Y	* paragraphs [0017] - [0025]; figures 1-7 * -----	4,14	
X	WO 01/43132 A (DUBOIS LTD [GB]; FRASER ANTHONY HENRY JOSEPH [GB]; PIJANOWSKI STEFAN A) 14 June 2001 (2001-06-14) * page 2, paragraph 3 - page 3, paragraph 3; figures 1-3 * * page 4, paragraph 6 - page 5, paragraph 4 * * page 6, paragraph 2 * -----	1-3,5-7, 11-13, 15,16	
X	US 5 267 647 A (STUMPFF DAVID L [US] ET AL) 7 December 1993 (1993-12-07) * column 9, lines 53-68; figures 13-16 *	1,2,5-7, 11,12, 15,16	
X	US 2004/108230 A1 (HSU HSIEN-CHE [TW]) 10 June 2004 (2004-06-10)	1,2,6, 10-12, 16,20	TECHNICAL FIELDS SEARCHED (IPC)
Y	* paragraphs [0005], [0006], [0014] - [0017]; figures 2-5 *	4,14	G11B
Y	WO 98/49684 A (IMATION CORP [US]; TERASTOR CORP [US]) 5 November 1998 (1998-11-05) * page 22, line 9 - page 23, line 21; figures 5,8,9 *	6,10,20	
Y	US 2003/106814 A1 (GELARDI JOHN A [US] ET AL) 12 June 2003 (2003-06-12) * paragraph [0040]; figure 9 *	6,10,20	
A	-----	1,5, 7-11, 15-20	
The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
EPO FORM 1603 03.82 (P04C01)	Munich	7 February 2007	Lehnberg, Christian
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 06 02 2069

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

07-02-2007

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 2003196916	A1	23-10-2003		NONE		
WO 0143132	A	14-06-2001		AU 2189701 A DE 60009168 D1 DE 60009168 T2 EP 1258002 A1 US 2004045845 A1		18-06-2001 22-04-2004 23-09-2004 20-11-2002 11-03-2004
US 5267647	A	07-12-1993		NONE		
US 2004108230	A1	10-06-2004		NONE		
WO 9849684	A	05-11-1998		AU 7362898 A DE 69811880 D1 DE 69811880 T2 EP 0979509 A1 US 6490242 B1		24-11-1998 10-04-2003 27-11-2003 16-02-2000 03-12-2002
US 2003106814	A1	12-06-2003		AT 328349 T AU 2002366557 A1 BR 0214857 A CA 2469637 A1 CN 1602530 A DE 60211946 T2 DK 1454320 T3 EP 1454320 A2 HU 0402551 A2 JP 2005512899 T MX PA04005586 A PT 1454320 T WO 03050812 A2 US 2005189244 A1 US 2006054520 A1		15-06-2006 23-06-2003 03-11-2004 19-06-2003 30-03-2005 25-01-2007 02-10-2006 08-09-2004 28-04-2005 12-05-2005 23-03-2005 31-10-2006 19-06-2003 01-09-2005 16-03-2006

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 59098106 A [0001]
- GB 0600903 W [0001]
- GB 0505004 A [0001]
- US 728456 P [0001]
- US 60728497 B [0001]